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PECULIARITIES OF THE DEAF AND DUMB,

AS REGARDS MEDICAL TREATMENT, AND THEIR IDIOCYNCRASIES, WHICH
HAVE BEEN OBSERVED AT THE ULSTER INSTITUTION.

BY

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*The Profits of this publication will be given to the funds of the Ulster
Institution for the Deaf and Dumb, and the Blind.*

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ONE-HANDED ALPHABET

As used in the Ulster Institution for the Deaf & Dumb, & the Blind.

A, a, a.



B, b, b.



C, c, c.



D, d, d.



E, e, e.



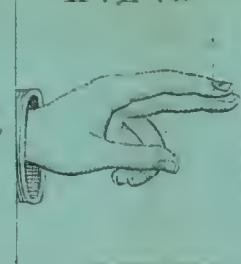
F, f, f.



G, g, g.



H, h, h.



I, i, i.



J, j, j.



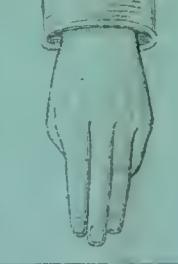
K, k, k.



L, l, l.



M, m, m.



N, n, n.



O, o, o.



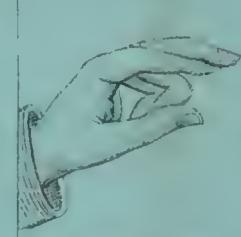
P, p, p.



Q, q, q.



R, r, r.



S, s, s.



T, t, t.



U, u, u.



V, v, v.



W, w, w.



X, x, x.



Y, y, y.



Z, z, z.



&, &, &.



good.



bad.



equal.



INTRODUCTION.

THE number of Deaf and Dumb, determined as accurately as possible, from investigations made in every quarter of the globe, both amongst savage, as well as civilized nations, and combined with the census returns that are available, appears to be at least 500,000. Of this number 82,000 are contained in Europe, and 10,000 in North America. In 1851 there were in Great Britain and Ireland, 18,300 deaf-mutes. According to the census returns of 1861, the deaf and dumb have increased in England and Wales, from 10,314 in 1851, to 12,227 in 1861; and in Ireland there were 4,930 in 1861, against 4,747 in 1851.

For the education of Deaf-mutes, it is calculated, that there are 200 schools in Europe and America, containing, about 11,000 deaf-mutes:—Of these Institutions, 18 are in British America and the United States; 11 in England and Wales, 5 in Scotland, and 4 in Ireland. Those in America and on the Continent of Europe, are largely patronised and supported by the various Governments, while in Great Britain and Ireland, they are almost exclusively maintained by the voluntary contributions of the public.

As regards the education of the Deaf and Dumb in Continental countries, the King of Denmark, years ago declared, "that every Deaf and Dumb person in his kingdom should receive the education necessary to make him a useful member of society."

The education of these children has attracted much attention of late years, and great exertions have been made to train them for entering on useful employments; the most efficacious plan to obtain which, has been found, on experiment, to bring them together under properly qualified instructors in Institutions devoted solely to this purpose.

One of these highly useful Institutions exists in Belfast, and from the kindness of those connected with it I have been enabled to collect the various facts, &c., contained in the following pages, as regards their education, the diseases to which they are peculiarly liable, medical treatment, &c.

I also take this opportunity of thanking the Rev. John Kinghan, the Principal of the Institution, for the courteous, and kind manner in which he has allowed me to make free use of his lectures, and notes.

Belfast, August, 1865.

CHAPTER I.

“THE EDUCATION, AND TRAINING OF THE DEAF AND DUMB.”

In the year 1845, the pupils of the Ulster Society, for the education, and maintainence of the Deaf and Dumb, and Blind, were removed to their new establishment in Belfast; the office-bearers of which consist of a Committee, Chaplains, Physieian, Principal, Matron and Teachers. No child is admitted into the Institution as a boarder, except between eight and thirteen years of age; and none either as a boarder or day pupil, until the parents or friends shall have returned satisfactory answers to the several queries contained in a printed form supplied by the Seeretaries. The following extract from the Report may not be uninteresting:—“At the close of 1863, your pupils numbered 126, viz.:—One hundred and five deaf and dumb, and twenty-one blind. Thirty-six new pupils have been admitted during the year 1864, namely—twenty-four deaf and dumb, and twelve blind, making a total of 148, of whom 117 are deaf and dumb, and 31 blind. During the past year the Institution has been free from any epidemic complaint and the health of the inmates good. The alterations in your buildings, connected with the erection of your new school-rooms have doubtless contributed largely to the improved sanitary condition of the establishment. The old school-room has been appropriated to an exercise-room for the boys, and some excellent gymnastic appliances have been fitted up in it; which should promote the physical health of the inmates.”

For the following remarks on the education, and disposition, of the deaf and dumb, I am indebted to the Rev. John Kinghan, the accomplished Principal of the Institution.

The children contained in the Ulster Institution, have been taken indiscriminately from the nine countics of Ulster, and are receiving a good English education, some of the blind being taught

music. When these children leave school, they are instructed in various trades so as to give them a means of earning their livelihood. As regards the peculiarities of deaf-mute instruction I may be allowed to commence the following remarks by stating, that "to be born deaf, or to lose the sense of hearing before the power of speech is attained, or confirmed, or the stock of language so copious as to impress the memory, is invariably followed by dumbness. It is not usual that dumbness proceeds from any malformation of the organs of articulation, or from any other cause than that of deafness, or which is sometimes the case, from want of intellect. Deprivation of speech is not the only calamity which want of hearing involves, for in the case of young persons, it usually entails a train of evils which few can rightly conceive. I have met with many who vastly underrated the extent of the privation under which deaf-mutes labour, and who believed, that if the deaf and dumb were only put in possession of a method of giving expression to their ideas, that all they required had been obtained. For example, it is often imagined, that if the deaf and dumb were only taught the manual alphabet, that they could then spell out words, and sentences, and that they must of necessity comprehend the ideas that were thereby expressed. This, however, is very far from the fact.

Congenital deafness is one of the sorest calamities that can befall a human being. The dispensation of Providence that closes the ear of a child at birth against the admission of sounds, shuts his mind up in a cell where scarcely a ray of intellectual, or moral light dawns on his miserable solitude.

A deaf-mute may exhibit many of the traits of character that are possessed by his more fortunate fellows, and to the eye of a superficial observer, there may seem little to distinguish him from others; still he is a different being. Not only is his knowledge of the common affairs of life bounded by his own limited and imperfect observation, but his mind is a complete blank with regard to the momentous realities which concern him as an immortal being. There is a notion very common amongst men—as common as it is unfounded—that deaf-mutes are much quicker of apprehension than others; and that when nature takes away one sense she supplies the one next to it in importance with greatly increased power; and so they conclude that the deaf and dumb must be

easily educated. But this is a delusion, for the deaf and dumb as a class are neither quicker, nor duller of apprehension than others; and there is in reality no compensating power in either the mental, or physical endowments of these children, except so far as this, that being so dependent on the use of the eye, there may be liveliness and quickness about it, which is not so manifest in others; but notwithstanding this, the mind in its operations, through the organs of sight, possesses no augmented perception.

The great object of educating the deaf and dumb then is, to take for a season these children of the stranger—these aliens in the country of their birth—from among the sons and daughters of the land, and to naturalise them by a diligent development of their mental faculties, and by a judicious moral and religious training, in preparation for that world in which they are destined here below to dwell; and above all to enrol them in holy citizenship with the saints in light.

CHAPTER II.

“SEMILOGY.”

As much difficulty is frequently experienced, towards forming a correct diagnosis, I hope to be pardoned for offering the following remarks.

The manifestations of disease, may be divided into *The Expression of the Face, Nutrition of the Body, Perspiratory Functions, State of the Organs of Voluntary motion, Signs Furnished by the Nervous System, Functions of Vision, State of the Respiratory Organs, Arterial System, Digestive, Urinary, and Sexual Functions.*

The expression of the face is frequently in inutes characteristic of various diseases. Not only may there be signs of intense suffering, but often a vacant look showing only too well, loss of consciousness. During sleep this sign is most valuable; when we have a drooping state of the eyelids, vital exhaustion is frequently present, and this state of the system is sometimes accompanied by a dark circle around the eyes. The colour of the countenance will, of course, vary according to the disease under which the patient labours,

as also the state of the surface of the body, both as regards colour, moisture, temperature, &c. As regards Nutrition we may have this function excessive, or emaciation combined with flaccidity.

In the perspiratory functions, we usually have in mutes a dry, hot sensation, rather than a burning state of the skin in diseases of an inflammatory nature, but in some complaints the reverse occurs. The smell will sometimes be a help towards the diagnosis.

The organs of voluntarily motion, are variously affected. In diseases of a low type, there is great loss of muscular power, cramps and convulsive attacks being often present, in strumous subjects emaciation of the extremities, frequently occurs; the manner of walking is also a valuable sign.

In obtaining help towards a correct diagnosis, by means of the nervous system, the state of the eye is a sign of much importance, as in mutes, this is generally an index which is of much value to the physician. We also must find out by examination, that the nerves of sense are in a state capable of transmitting impressions to the brain, as the power of hearing is lost. Again the signs furnished by sensation, and sensibility, are worthy of attention as regards pain, &c.

The mind is often in a state of impotency, especially in young mutes, this state being induced by the long continued inactivity to which they have for so many years been subjected.

The state of the organs of respiration is of great importance, as mutes frequently labour under chest affections, which often exist in an incipient form, and I hope to be able to prove this in a future chapter; here I only mention the different states of the respiratory system which demand notice; first, Frequency and Quickness of Breathing, Expansion of the Chest, State of the Mouth, and Nostrils during respiration, Difficult Respiration, Odour of the Breath, Sighing, Expectoration, whether profuse or otherwise, and we must judge of the state of the lungs by the respiratory murmurs and percussion alone.

As regards the arterial system, the state of the pulse is to be noted, as also whether there be palpitations, irregularities, &c., of the heart's actions.

The organs engaged in the process of digestion, are to be examined, also the state of the bowels, tongue, and appetite, and lastly the Urinary and Sexual functions are not to be overlooked.

CHAPTER III.

"DISEASES OCCASIONING DEAF-MUTEISM."

The congenital causes which produce deaf-mutism are not known, but it is thought to be in the nervous apparatus of the ear.

According to Mr. Toynbee, the causes of acquired deaf-muteism arises from Searlatina, Measles, Hydrocephalus, Convulsions, Fright, &c.

In examining the ears of the deaf and dumb, the membrana tympani is found to be in different states, viz.:—Opaque, perforated, very concave, thickened, absent, or in some cases a polypus may be attached to it, or the disease may be occasioned by some change in the meatus, or eustachian tube.

Mr. Toynbee gives the following condition of the ears of 141 congenital cases, in which sounds were heard.

In 11 who heard a clapping of hands, 7 had a normal aspect.

In 2 each membrana tympani was opaque.

In 1 each meatus was distended by cerumen, and the membrana tympani was opaque.

In 1 each membrana tympani was concave.

In 44 who heard a shout, 21 were apparently normal.

In 7 each membrana tympani was dull.

In 4 each membrana tympani was dull and meatus full of cerumen.

In 4 each membrana tympani was opaque.

In 4 each membrana tympani was concave.

In 2 each membrana tympani was concave and opaque.

In 2 each membrana tympani was perforated.

In 39 who heard a loud voice, 24 were apparently natural.

In 7 each membrana tympani was dull.

In 3 each membrana tympani was dull and meatus full of cerumen.

In 3 each membrana tympani was opaque.

In 1 each membrana tympani was concave.

In 1, in one ear, the membrana tympani was normal; in the other opaque, and the meatus full of cerumen.

In 43 who heard the vowels and repeated them, 24 appeared to be normal.

In 6 each membrana tympani was dull.

In 5 each membrana tympani was dull, and the meatus full of cerumen.

In 5 each membrana tympani was opaque.

In 1 each membrana tympani was concave.

In 5 who heard the words and repeated them, 2 appeared normal.

In 1 each membrana tympani was dull.

In 1 each membrana tympani was dull and meatus full of cerumen.

In 1, in one ear, the membrana tympani was opaque and concave, and in the other it had fallen in towards the promontory.

In the single instance in which short sentences were heard, and repeated, the membrana tympani was dull.

As it would be digressing to enter into a consideration of the ears in cases of acquired deaf-mutism, I beg leave to refer to Mr. Toynbee's work on diseases of the Ear, and from which I borrow the following table of the condition of the ear in 36 dissections of deaf-mutes :—

Meatus Externus.	Membrana Tympani.	Tympanum.	Labyrinth.	Nerve.	Name of Observer.
Absent.	Healthy.	Healthy.	Healthy.	As soft as mucus.	Itard.
Do.	Do.	Do.	Do.	Healthy.	Fabrieus.
Do.	Do.	Do.	Do.	Do.	Do.
Healthy.	Do.	Do.	Do.	Do.	Itard.
Do.	Destroyed.	Containing vegetations from mucous mem- brane. Ossicles absent.	Do.	Do.	Do.
Do.	Do.	Do.	Do.	Do.	Do.
Do.	Partially.	Containing scro- fulous matter.	Do.	Do.	Cock.
Do.	Do.	Healthy.	Do.	Do.	Do.
Do.	Do.	Do.	Do.	Do.	Do.
Do.	Healthy.	Containing cal- careous matter.	Do.	Do.	Itard.
Do.	Do.	Full of gelat- inous matter.	Full of gelat- inous matter.	Do.	Do.
Do.	Do.	Containing a yellow fluid.	Healthy.	Harder than na- tural.	Rosenthal.

Meatus Externus.	Membrana Tympani.	Tympanum.	Labyrinth.	Nerve.	Name of Observer.
Healthy.	Healthy.	Anchylosis of stapes to fenestra ovalis.	Healthy.	Healthy.	Valsalva.
Do.	Do.	All the Ossicles wanting.	Do.	Do.	Reimarus.
Do.	Do.	Healthy.	Vestibule full of caseous matter.	Do.	Haighton.
Do.	Do.	Do.	Cochlea consisting of one turn and a half.	Do.	Munidini.
Do.	Do.	Do.	Vestibule, cochlea, and semi-circular canals absent.	Do.	Meekel.
Do.	Do.	Do.	Semi-circular canals absent.	Do.	Murer.
Do.	Partially destroyed.	All the Ossicles absent.	Two of the semi-circular canals imperfect.	Do.	Coek.
Do.	Healthy.	Healthy.	Do.	Do.	Do.
Do.	Do.	Do.	Healthy.	Atrophied	Sylvius.
Do.	Do.	Do.	Do.	Indurated	Arneman.
Do.	Do.	Do.	Do.	Wanting.	Morgagni.
Do.	Do.	Do.	Fenestra rotunda closed by bone in each ear.	Healthy.	Cock.
Do.	Do.	Do.	One semi-circular canal incomplete in one ear; in the other ear healthy.	Do.	Thurman.
Do.	Do.	Do.	Aqueductus vestibuli very large.	Do.	Dalrymple
Do.	Do.	Do.	Healthy.	Very hard	Rosenthal.
Do.	Do.	Do.	Sem-circular canals absent in one ear.	Healthy.	Murer.
Do.	Do.	Do.	Filled with caseous matter.	Half its usual size.	Haighton.
Do.	Do.	Do.	Healthy.	Atrophied	Hoffman.
Do.	Do.	Do.	Do.	Compressed by a tumour.	Duverney.
Do.	Do.	Do.	A portion of one of the membranous semi-circular canals filled with Otoconie.	Healthy.	Toynbee.

Meatus Externus.	Membrana Tympani.	Tympanum.	Labyrinth.	Nerve.	Name of Observer.
Healthy.	Healthy.	Healthy.	The Superior and Posterior semi-circular canals incom- plete in right ear.	Healthy.	Toynbee.
Do.	Do.	Do.	The Superior incomplete in left ear, mem- branous semi- circular canals absent.	Do.	Do.
Do. Do.	Do. Destroyed.	Do. Mucous mem- brane thick.	Healthy. Lamina Spiralis near the vesti- bule filling the scala tympani.	Do. Otoconie obstruct- ing the canal.	Do. Do.

CHAPTER IV.

"MORBID STATES OF THE EAR, CONGENITAL, OR ACQUIRED, WHICH HAVE BEEN OBSERVED IN DEAF AND DUMB PERSONS."

Frequently a deposition of tubercles, are found in the tympanum, and mastoid cells by *post-mortem* examination shewing a strumous diathesis. The membrane lining the fenestra rotunda is sometimes ossified, or thickened, and the cochlea improperly developed. Schallgruber has remarked in a few cases, the vestibule more contracted, and smaller than natural.

The semi-circular canals are usually defective in mutes, they may be either smaller, contracted, incomplete, filled with caseous matter, terminating in a cul-de-sac, or absent. The aqueducts are often larger than natural.

Saissy mentions a rather curious case, in his "Essai sur les maladies de l'oreille Interne," of the total absence of the Labyrinth in a young child, which died in the *Charité* at Lyons of fever. "The membrana tympani was normal; but the ossicles were absent,

and the cavity of the tympanum was full of mucous matter. The vestibule, cochlea, semi-circular canals, and fenestra were wanting. Eustachian tube natural."

Sometimes the auditory nerve is found diseased, or compressed by a tumour.

Mutes have occasionally been taught to speak, and to acquire this, it is necessary that the deaf and dumb person should watch and imitate the various motions of the lips &c., of their instructor. It is said that Deleau has, in a few cases, been successful in giving the power of hearing to mutes; but it is uncertain whether the sense of hearing is permanent or not.

CHAPTER V.

"THE MANNER OF ASCERTAINING, WHETHER A CHILD IS DEAF AND DUMB."

To illustrate this subject, it will be necessary to touch briefly on Acoustics. A sound is heard, when any sudden impulse, or shock is given to the air, which may be in contact either directly, or indirectly with the ear.

It is well-known that sound arises from the vibrations of the air, and the shock which causes the sensation of sound spreads, or is propagated in all bodies, either solid or fluid, but with decreasing strength, as the distance becomes greater.

The principles laid down respecting the origin and propagation of sound, and the causes of the different phenomena it exhibits, will usually be found to have corresponding parts to each other in the structure of the human ear.

For the purpose of description, the human ear may be divided into three parts, viz., the external ear, the tympanum, and the labyrinth. The external part of the ear, called the concha, is adapted to those vibrations of air necessary to sound. From the concha we have a tubular passage leading inwards; the purpose of which is to collect and concentrate the vibrations, so as to fall

upon the membrana tympani. The second division consists of that cavity lying between the membrane called the tympanum, and lastly we have the labyrinth consisting of the vestibule, semi-circular canals, and cochlea. The action of the principal parts, seems to be as follows. The pulsations falling on the membrana tympani, cause it to vibrate; and, according to Mr. Martin, are continued through the agency of the chain of bones to the foramen ovale, when the nerve is prepared to receive them, in agreement with the laws of hydraulie pressure, and are thus transmitted to the brain. Now, it sometimes happens that a child is said not to be deaf, because on a loud noise being occasioned, as by shouting loudly, the child starts or looks up; but it is very well-known, that all loud noises are accompanied by considerable vibration, of the walls and floor of the room the person may be in, so that although deaf, we may have our attention directed, to some particular spot, by the vibrations alone.

For the purpose of ascertaining whether a child is deaf, various plans have been recommended. The following seems to be one of the most simple; the child sitting on the knee of the nurse, with its back towards the Physician, and being amused by a toy of some description, so that its attention may be distracted, can be experimented on in a manner something similar to the following. After warning the nurse and parents not to start or exhibit any symptoms of surprise, the physician then may either shout or clap his hands loudly. If the child should start, or show some symptoms of hearing, it will be evident that some degree of hearing exists.

If the nervous apparatus of the ear is disorganised, or improperly developed, it is impossible to impart the sense of hearing; all that can be done in such a case, is to have the child educated as a deaf-mute.

After the lapse of years a slight degree of hearing sometimes becomes apparent. When this occurs, some attempt ought to be made to develop it, and for this purpose counter-irritation over the mastoid process, will often prove useful, or the use of the artificial drum can be tried.

CHAPTER VI.

“ SANITARY, AND DIETETIC MANAGEMENT.”

It has been remarked, that the deaf and dumb when confined to the house, say, from wet weather, in one room, even when large and well ventilated, emit a very peculiar, *heavy* smell, and any one having once experienced this odour will readily recognise it again. Now these children do not perspire more than others, so that it cannot be caused by immoderate sweating, and as their clothes are frequently changed, as well as the use of baths insisted on, it cannot be ascribed to neglect from this cause.

Latterly in the Ulster Institution this odour, which I have mentioned, is not often experienced, owing to the system of ventilation being of a first class order. Now, this smell must be owing to some peculiar matter which is constantly emitted ; and this matter must differ somewhat either in quantity or property ; but as no analysis of the perspiration has been made, I cannot say upon what it depends.

Moderate gymnastic exercise is very useful, as it tends towards developing the weak and soft muscles, which these children usually have, but, after admittance into this Institution, their physical strength seems to be the same as that possessed by others. Baths occasionally are highly beneficial, and combined with brisk friction, conduce not a little to health.

The inmates of this Institution retire to rest at eight o’clock, and rise at six o’clock, a.m. After school hours, walks into the country, or to the Botanic Gardens are indulged in. Cricket, and other out-door games are allowed. In wet weather the boys have a capital gymnasium to exercise in.

The dietetic treatment of mutes, is a very important subject, and experience proves the food should be of a plain, wholesome, easily digested character ; and of a solid rather than fluid description. A mixed diet containing a large proportion of easily assimilated farinaceous material seems to be the best.

As nearly all the children on the sick list suffer from some scrofulous affection, and to which I shall have occasion again to refer, I shall

only in this place mention the system of dietetic management which has been pursued for some years in the Ulster Institution at Belfast.

The following account I published in *The Dublin Quarterly Journal*, for May, 1865 :—

For several years, various plans of treatment had been tried, for the purpose of preventing the ravages of scrofula, but without any success. In the year 1862, it was determined to try linseed, in the manner hereafter mentioned, it being well-known to contain a large amount of oil, and excellent nutritive matter for producing fat, as is to be seen in cattle fed on this substance.

In the year 1862, as before mentioned, linseed was first tried as a dietetic agent, combined with bran. Now it has been estimated that as much as twelve per cent. of nutritious matter is contained in bran, and this matter is commonly called by chemists gluten ; but M. Mége, Mouries, has found this substance to consist of a vegetable ferment, or metamorphie nitrogenous substance, and which he has named *cerealin*, and another vegetable substance called *casein*.

Cerealin, which I may call the active principle of bran, is obtained by washing bran with cold water, in which fluid it readily dissolves, and may be precipitated by alcohol. As contained in bran, it is an active ferment on starch, and glucose producing the lactic and butyric changes, but never alcohol.

This substance then being a special solvent of starch and gluten as contained in flour, and a good tonic, as also stimulant to weakened digestion, in increasing to a remarkable extent the dissolving properties of pepsine, was on account of these reasons combined with linseed, as in the following formula for one quart of the soup :—Take of

Linseed, half-an-ounce ;

Fine bran, one ounce ;

Water, one quart ;

boil for two hours and strain, then add beef from half a pound, to a pound, and make into a soup with vegetables, &c.

This soup is given at dinner four days in the week to all the inmates, and since its use began, chest affections, and dyspeptic attacks, have not been so frequent as formerly.

Another excellent article of diet, but rather expensive for hospital use, is arrow-root, which is obtained from the *Maranta Indica*, a native of the East Indies, but cultivated also in the West Indian

Islands. The substance used as a dietetic agent is the starch of the tubers, and its chemical composition being $C_6 H_{10} O_5$. Now it appears that all amylaceous substances when taken into the animal economy, go to form fat, and produce animal heat by means of the consumption of the carbon and hydrogen that they contain ; and arrow-root being one of the richest and most nutritious of the starchy substances, it will be evident that, in diseases accompanied by much emaciation, it will prove very serviceable.

The usual diet of the inmates of the Ulster Institution is for breakfast, milk and stirabout ; meat and potatoes, and four days in the week, soup, containing the essence of linseed and bran previously mentioned, for dinner ; and bread and milk, for supper.

It may not be uninteresting to mention, that according to Dr. Mayer, of Berlin, the milk of stall-fed cows is frequently acid, and as the milk obtained in large towns is usually procured from this source, the use of lime water, or other alkali will often be necessary.

CHAPTER VII.

"DISEASES TO WHICH DEAF AND DUMB CHILDREN ARE PECULIARLY LIABLE."

One thing useful to the physician attached to an Institution for the deaf and dumb, is a knowledge of the deaf-mute alphabet ; and of alphabets there are two kinds, viz. :—The one-handed and two-handed alphabets. The former is the one in use at the Ulster Institution, and has been found more convenient as by it only one hand is required, the other hand at the same time can be employed at anything else. The physician then, having a knowledge of the alphabet, is enabled to find out for himself the various symptoms peculiar to different diseases.

It has been frequently remarked at the Ulster Institution that there is a peculiar liability in mutes, to some forms of disease, more than others. Whether this arises from too close marriages I never had the opportunity of knowing.

Dr. Hervier, in a paper published in the *Journal of Practical Medicine and Surgery*, for July, 1865, speaking of consanguineous

marriages, states that "At Rive-de-Gier, a town containing 15,000 inhabitants, in *crossed* couples, there occurred, twelve cases of deaf-muteness, twenty-five of sterility, and three of polydactylism; whereas in upwards of twenty consanguineous, but well-assorted marriages, the children have lived, and may be considered as models of health and symmetry." Dr. Hervier considers it necessary, that one or both parents must "labour under some constitutional taint," so as to occasion deaf-muteism, or sterility in their offspring.

It may be interesting to add that the Report of the Ulster Institution for 1864, shows that the number of mutes in the School was 117. It seems that 15 of the parents of these children had *two* or *three* deaf-mutes in their family. This curious fact seems to be more common in some counties than others, as there are in the County of Antrim, 7 families, in which this occurs, in Down, 4; in Monaghan, 2; in Tyrone, 1; and in Armagh, 1.

The following are the diseases that have been most frequently observed in mutes:—Scrofulous complaints, Catarrhal attacks, Phthisis, Dyspepsia, Bronchitis, Diarrhoea, Tabes Messenterica, and Furunculus.

One disease which I find mentioned in the medical report book, and which is extremely rare in Ireland, is Bronchocele, or Derbyshire Neck. I do not mean to enter into any theory of its being a disease peculiar in this part of Ireland to the deaf and dumb, but bearing in mind the great liability of these children to scrofulous diseases, it may be owing to this cause, just as in the same manner as in strumous subjects the different glandular bodies become affected. I am quite aware that in chronic cases the veins covering the bronchocele become varicose, but this may arise from the pressure of the tumour on deeper vessels. Purpura hæmorrhagica is another disease rather rare here; but it has been found to occur amongst new arrivals.

Strumous affections manifest themselves nearly in the same manner as in other individuals, by enlargement of the lymphatic glands, especially in the neck, affections of the conjunctiva, and edges of the eyelids, swollen lips, eruptions behind the ears, disordered bowels, protrusion of the abdomen, swelling of the joints, particularly the knee, periosteal tumours, &c.

In catarrhal attacks the greatest caution, as well as prompt treatment is necessary, as phthisis has frequently supervened upon a

"common cold," no symptoms of this formidable disease existing previously. Phthisis often exists in an incipient form, and after some exciting cause runs its course rapidly. The following table of deaths from consumption may illustrate this subject, and I believe that I am justified in stating that they are ~~not~~ *below* ^A average, as children having this disease are sometimes sent home to their relations.

INMATES.

Year.	Mutes.	Deaths from Phthisis.	Year.	Mutes.	Deaths from Phthisis.
1864	117	—	1854	68	—
1863	105	1	1853	59	1
1862	102	3	1852	40	4
1861	105	1	1851	48	3
1860	99	2	1850	45	3
1859	94	3	1849	46	4
1858	91	3	1848	47	1
1857	83	3	1847	50	2
1856	73	2	1846	52	1
1855	64	2			

The following statement of the cases requiring medical treatment, is taken from the Medical Report Book. I have not been able to separate the blind from the mutes, but as the the numbers of both are given, a comparison can be drawn. Under serofula, all strumous complaints are classed. Usually all diseases of a contagious kind are sent out to Hospital.

During 19 years the number of deaf and dumb inmates has been 1,388, and of blind 288, of these during this time there have been attacked with—

Phthisis, 54.	Furunculus, 12.
Serofula, 70.	Synoeha, 5.
Catarrh, 155.	Small-pox, 2.
Dyspepsia, 41.	Diarrhoea, 10.
Bronchitis, 34.	Scarlet-fever, 36.
Hooping-cough, 8.	Icterus, 1
Bronchocele, 3.	Pleurisy, 4.
Typhus, 5.	Pneumonia, 2.
Purpura haemorrhagica, 4.	Dysentery, 2.
Hæmoptysis, 8.	Stomatitis, 1.
Favus, 5.	Neuralgia, 1.
Herpes, 11.	Epilepsy, 1.
Erysipelas, 7.	Concussion of the Brain, 1.
Measles, 46.	

CHAPTER VIII.

“ MEDICAL TREATMENT OF THE DEAF AND DUMB.”

From what has been stated in the foregoing chapter it will be evident that scrofulous complaints are the most common. These affections are best treated by careful dietetic management; the medicinal agents that are most useful being cod liver oil, and the syrup of the iodide of iron. As it would be unnecessary to enter into a description of the medicinal treatment required in the various diseases, which have been enumerated. I shall only offer a few suggestions regarding their management.

1st.—In all diseases occurring in mutes, prescribe a stimulating plan of treatment, keeping up the strength as far as possible.

2nd.—All depressing remedies are usually injurious.

3rd.—Great attention should always be paid to the state of the digestive organs, as sudden derangements of the stomach, and liver are apt to occur.

4th.—Affections of the chest are apt to supervene from the slightest cause, frequently phthisis.

5th.—A flannel, or chamois leather waistcoat ought to be worn next the skin especially during Winter.

6th.—When called on to administer expectorant medicines, give those of a stimulating, rather than depressing character.

7th.—Stimulants, both medicinal and dietetic are very useful.

8th.—Tonics, especially the light vegetable, and iron preparations are of great value, especially during the period between the decline of the disease and convalescence.

FINIS.

